REMARKS

Claims 8 - 21 stand rejected under 35 U.S.C. §103(a) as being unpatentable over Tuttle et al in view of Moore et al. The Examiner's thoughtful consideration of the present application is most appreciated. In view of the present amendment and following remarks, the Examiner is respectfully requested to reconsider the outstanding rejection and allow the present application to issue.

By way of the present amendment, the claims now more clearly recite what the applicants regard as the invention. Each of the independent claims have been amended herein to specifically recite searching for an element or entity which is a subset of the image of the system under test. Support for this language is found on page 8 in lines 17-19, between page 10 line 4 and page 11, line 9, and between page 15, line 4 and page 16, line 10 of the present specification.

Newly added claims 22 - 27 further require that the user input action occur directly within or in specified relation to the element or entity, and in the claims further dependent that the action is a mouse click.

The Examiner will recognize that Tuttle et al stores a representation of the entire screen, or a predetermined portion of lines or screen width, and then checks during testing to see if the exact pattern reproduces later. Unfortunately, a large number of factors will change between diverse computers that will interfere with this test. Tuttle contemplates some of these factors, such as flashing cursors, and considers cutting off a portion of the screen to remove clocks and the like. However, the Examiner will recognize, for example, that modern windowing programs normally cascade, meaning that when a new window is opened, the new window will be shifted down and to the right from the previous window. So, unless exactly the right number of windows have been opened prior to the start of the Tuttle testing system, Tuttle will reject a perfectly fine operation due to the shifting resulting from cascading windows.

In addition, since Tuttle is only able to match a screen for "pass/fail regression testing" (Tuttle Col 14, lines 38-41), there is no opportunity to choose what action to take, depending

upon what occurs. Instead, Tuttle must simply halt the program and return an error when a screen image fails to match.

The Examiner will appreciate that Tuttle is consequently limited solely to testing of hardware such as might occur at a manufacturing facility, where every computer is loaded with the same software, and is tested immediately at start-up.

In contrast, the present invention searches the image for individual elements, such as "icons as illustrated, or various buttons, message boxes, prompts or any other graphical image or control." (Present specification, page 8, lines 17-19) As a result, the user does not need to worry where on the screen the image appears, and can make intelligent decisions about any subsequent actions, including the placement of a mouse click or other similar action relative to the placement of the individual element, and also alternatives that might arise and still be handled to continue the testing.

This may seem to be a subtle difference, but the implications are far reaching. For exemplary purposes, a calculator can be tested through all numbers and operations by storing the images for each of the operations and the numbers 0 - 9. For a simple calculator, the operations might be "add", "subtract", "multiply", "divide", "equals", and "clear". Then, using simple "For Next", "Repeat With", "Do While" loops or the like, each of the operations may be tested and the results confirmed by saving the images of operations, numerals and any other necessary elements, and using very simple loops requiring less than forty lines of code. Both the code and the images will take up very little storage space. This is done without concern for where on the screen the calculator might appear. In contrast, Tuttle must actually execute every possible test, and then save the image to compare with future systems. The storage of these images will require an impractical amount of time, and an unreasonable amount of storage space.

In view of the novelty now recited herein, the grounds for rejection found in the outstanding office action are now moot. No new matter has been added by way of the present amendments. Consequently, in view of the present amendment and remarks, the Examiner is

respectfully requested to reconsider the rejection of record and allow the present application to issue. The present response is not considered to acquiesce with regard to the novelty of the dependent claims, and should the Examiner need to consider these as well, the Examiner is also respectfully requested to specifically reconsider the novelty where neither the Tuttle nor Moore references illustrate the features recited herein.

Should there remain any open issues in this application which might be resolved by telephone, the Examiner is respectfully requested to call the undersigned at 320-363-7296 to further discuss the advancement of this application.

Sincerely,

Albert W. Watkins

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